DOCUMENT RESUME

ED 318 522 JC 900 250

TITLE Registration in Public Community Colleges and Universities: Report and Recommendations of the Postsecondary Education Planning Commission, 1990--Report 5. Prepared in response to Specific Appropriation 587 of the 1989 General Appropriations Act, Chapter 89-253, Laws of Florida.

INSTITUTION Florida State Postsecondary Education Commission, Tallahassee.

PUB DATE 15 Feb 90

NOTE 63p.; Prepared in response to Specific Appropriation 587 of the 1989 General Appropriations Act, Chapter 89-253, Laws of Florida.

PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC03 Plus Postage.

DESCRIPTORS *Academic Advising; Community Colleges; Comparative Analysis; Computer Software; *Computer Uses in Education; Higher Education; *Public Colleges; *Registrars (School); *School Registration; State Surveys; State Universities; Statewide Planning; *Student Attitudes; Two Year Colleges

IDENTIFIERS *Florida

ABSTRACT

This study was conducted in 1989 to analyze the registration processes used in Florida's public community colleges and universities, focusing on procedures, staffing, technologies used to facilitate registration, the relationship between student automated advisement systems and existing registration processes, and institutional procedures for determining a registration master schedule. Two surveys were distributed to the 37 postsecondary registrars in Florida, and a survey was disseminated to 1,000 students at 5 community colleges and 3 universities to gauge student satisfaction with institutional registration and advisement policies and procedures. Surveys were returned from all registrars and 794 students. Six on-site visits were conducted to interview registration personnel and to observe registration procedures. Study findings included the following: (1) all 9 state universities used interactive real time data input registration systems, with 7 using on-line terminal registration, one using interactive scanners, and 6 using touchtone telephone registration; (2) 67% of the university student survey respondents indicated that they registered by phone for fall 1989 classes, and the same percentage reported that they were satisfied with their registration experience; (3) all 28 community colleges used on-line terminal registration for at least one phase of registration, and 6 community colleges used touchtone telephone registration; and (4) only 17% of the community college respondents registered by phone in fall 1989, however, 73% were satisfied with registration. Recommendations for improving registration are included in the study report, along with a discussion of state-level centralization or decentralization of registration in California, Tennessee, Maine, North Carolina, New York, and Georgia. Selected survey results are appended. (WJT)

ED318522

POSTSECONDARY EDUCATION PLANNING COMMISSION

REGISTRATION IN PUBLIC COMMUNITY COLLEGES AND UNIVERSITIES

Prepared in Response to Specific Appropriation 587
of the
1989 General Appropriations Act
Chapter 89-253, Laws of Florida

JC 900 250

1990 - Report 5

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

W.B. Proctor

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

February 15, 1990

BEST COPY AVAILABLE

TABLE OF CONTENTS

EXECUTIVE SUMMARY..... i

I. INTRODUCTION..... 1

II. REGISTRATION IN FLORIDA..... 4

- Background Information
- The State University System
- Community Colleges
- Registration Technology
- The Registration Process
- Future Developments

III. STATE LEVEL INVOLVEMENT IN CAMPUS REGISTRATION SYSTEMS.....17

- California
- Tennessee
- Maine
- North Carolina
- New York
- Georgia
- Summary

IV. ISSUES AND RECOMMENDATIONS.....21

- Registration Systems
- Registration Staff
- Advisement
- Planning

APPENDIX A Selected Results of Surveys of Public Postsecondary Registrars

APPENDIX B Results of Survey of Students in Public Community Colleges and Universities

EXECUTIVE SUMMARY

The 1989 Legislature directed the Postsecondary Education Planning Commission to "conduct an analysis of the registration processes in the State University System and the Community College System. The analysis shall examine the staffing, the procedures, and the technologies used to facilitate the process including provisions for pre-registration and for the drop and add process." In addition to these charges, the Commission considered other areas not specifically included in legislative proviso, but which were pertinent to the overall investigation. These areas include the relationship between the newly created student automated advisement systems and existing registration processes, and institutional procedures for determining a registration master schedule. The study of registration was assigned to the Planning Committee by the Commission Chairman. Members of the Planning Committee include Alan Fickett, Chairman, Ralph Hogges, Robert Mautz, Thomas McGehee, and Carolyn Wilson.

Registration is one of the only student services used repeatedly by postsecondary students throughout their education experience. As the primary nonclassroom point of contact between the institution and its students, it is a key element in the overall education process. Basically, registration matches the academic needs of students with the human, physical, and fiscal resources of an institution. Registration an extremely complex process, is dependent on many variables including accurate academic advisement and advanced planning. It is also dependent on the willingness of faculty and students to teach and enroll in classes which meet in the evenings, on Saturdays and other less popular class times.

Students are occasionally dissatisfied with delays in the required registration procedures, or experience scheduling problems related to course availability or class meeting times. The Commission found, however, that the registration systems in the State's postsecondary institutions are as advanced as any in the nation, and that the State continues to provide resources to further develop the system. New technology continues to be added to existing campus procedures which should enable the registration systems to operate with greater efficiency.

Technology has had a profound impact on the processing of student information services. One of the most important developments in the last decade, interactive data input systems, has greatly changed the registration processes on postsecondary campuses. All of Florida's 37 public postsecondary institutions now use interactive data input registration systems which give an immediate response to a scheduling request. The type of system varies, however, from campus to campus. The newest interactive system, touchtone telephone registration, is in use by 12 public postsecondary institutions in Florida.

Florida is one of a handful of states that have established a statewide development team to produce software information systems at the university level. The Board of Regents (BOR) produces software packages for registration and other student information systems at the nine state universities. Use of the registration software package is not mandated by the State, although four universities currently use it and two plan to adopt the BOR software in the next two years. In Florida and in many other States, no statewide development

teams have been established to support a community college system. Community colleges with the appropriate hardware and trained staff are eligible to use the BOR software. Advances in technology have improved the capacity of institutions to offer student information services, however, it does not appear advantageous to mandate a single registration system for all of Florida's diverse higher education institutions.

The technical components of registration help determine how efficiently each institutional system will operate. Adequate academic advisement and careful institutional planning ultimately determine if a student will secure a course schedule that is academically meaningful and personally manageable. However, no registration system can guarantee that students will receive a class schedule that meets all of their personal preferences.

Just as adequate advisement and planning are necessary parts of an effective registration system, so are knowledgeable permanent staff who can provide students with accurate information and timely, helpful assistance. Technically sophisticated advisement and information systems are advantageous only if they are understood and used to their maximum potential by all requirements of an institution.

Advances in information technology have brought about major changes in the way institutions manage their data, and particularly manage the process of registration. The systems and procedures in operation today, however, will undoubtedly be refined or modified in the future. The changing nature of communication technologies will require an ongoing commitment by the State to keep Florida's postsecondary institutions at the forefront of information management and service. At the same time, institutions must adopt policies to strengthen planning and advisement methods to ensure that their registration systems operate at maximum efficiency and effectiveness. To help achieve those goals the specific recommendations proposed by the Commission are as follows:

Recommendation:

1. **The Board of Regents' Office of Standard Software Development Services (SSDS) should continue to provide voluntary assistance to universities as they develop and maintain their registration software systems.** That office, along with state communications experts and the local telephone company, should coordinate the conversion and implementation of telephone registration at any public university.

2. **To avoid possible telecommunication problems, public community colleges should provide advanced notice to the local telephone company, state communications experts and the SSDS before converting to touchtone telephone registration.**

3. **Community colleges should be encouraged to work together through regional consortiums to develop registration software that is applicable to their needs.** The State Board of Community Colleges should assist these colleges by providing ongoing support for software adaptation and implementation.

The software developments of the Board of Regents' Office of Standard Software Development Services should be made available on a voluntary basis to public community colleges.

4. **During the development and planning process, the University of South Florida's conversion to a relational data base system should be closely monitored by the Board of Regents and the State Board of Community Colleges to determine its effectiveness.** If warranted by the results of this effort, the two boards should consider approaches for the development of a prototype relational data base system for other public postsecondary institutions.

5. **Each public postsecondary institution should provide ongoing inservice education for registration staff.** Additional training could be provided during the annual meeting of the Florida Association of Collegiate Registrars and Admissions Officers (FACRAO). This forum should provide information on and training in all the components of registration systems as well as provide an opportunity for knowledge sharing and networking among postsecondary registrars.

6. **The Board Of Regents and the State Board of Community Colleges should continue to strongly encourage public postsecondary institutions to provide students and counselors with access to, knowledge of, and training in how to properly use the Student Academic Support System (SASS) and the Student On-Line Advisement and Articulation System (SOLAR).**

7. **To increase the accuracy of course planning and scheduling, all institutions within the State University System should use the Student Academic Support System (SASS) to help predict what courses, how many sections, and how many instructors will be needed for each semester to meet student demand.** Institutions should encourage each school or department to submit a yearly class schedule forecast to the chief academic officer and campus registrar. These forecasts will enable registrars to construct a more realistic and meaningful master schedule.

8. **As one mechanism to help universities better prepare and plan for community college transfers, the State Board of Community Colleges should modify the Student On-Line Advisement and Articulation System (SOLAR) to allow community college students to electronically request and receive an application for admission to one or more specific state universities.** Requests would be transmitted electronically to the universities thus providing administrators with an earlier gauge of student demand.

9. **To minimize the number of unnecessary drop and add transactions at State universities during the first week of classes, Board of Regents Rule 6C-7.003 should be amended to allow universities to charge a fee for drop and add transactions that**

take place after the first day of classes. In addition, universities should be allowed to raise the current $25.00 late registration fee to discourage students from registering after classes have begun.

10. **All postsecondary institutions should consider adopting a mandatory first day of class attendance policy to avoid vacant seats and a loss of class time.** Provisions for legitimate emergencies and extenuating circumstances should be written into each institution's policy.

11. **Board of Regents Rule 6C-7.002 should be amended to allow universities to require that students pay tuition and registration fees before the first day of classes.** Financial aid students should continue to be eligible for an automatic fee deferment.

I. INTRODUCTION

In proviso language accompanying Specific Appropriation 587, the 1989 Legislature provided funds for the Postsecondary Education Planning Commission to "conduct an analysis of the registration processes in the State University System and the Community College System. The analysis shall examine the staffing, the procedures, and the technologies used to facilitate the process. This examination shall include provisions for pre-registration and for the drop and add process." A report and recommendations are to be submitted to the State Board of Education and Legislature by March 1, 1990.

In determining the scope of the study, the Commission chose to include an examination of the relationship between the newly created student automated advisement systems and existing registration processes. Institutional procedures for determining a registration master schedule were also included in the Commission's analysis.

To direct this study, the Commission Chairman created a Planning Committee consisting of Commission members Alan Fickett, Chairman, Ralph Hogges, Robert Mautz, Thomas McGehee, and Carolyn Wilson. Commission staff met with appropriate personnel from the Legislature, the Board of Regents, the State Board of Community Colleges and postsecondary institutions to clarify the direction of the study, and to pinpoint those issues most likely to receive legislative consideration. To facilitate the legislative charge, the Commission contracted with Dr. William Younkin, a professor in the Department of Management Science at the University of Miami. Dr. Younkin is the former director of institutional research at Florida International University where he also previously served as university registrar.

In order to collect the most current information on registration systems and procedures, Commission staff distributed two surveys to the 37 public postsecondary registrars in Florida (See Appendix A). In addition, a survey was disseminated to 1,000 students at five community colleges and three universities which included questions to gauge student satisfaction with institutional registration and advisement policies and procedures. A total of 794 completed surveys were returned (See Appendix B). Commission staff conducted six on-site visits to interview registration personnel and to observe registration procedures.

It should be noted that this study was authorized in part as a result of a series of campus site visits conducted by Senator Curtis Peterson and staff of the Senate Higher Education and Senate Appropriations Committees in Fall 1988 and Winter 1989. The group went to seven of the nine state universities to gain first hand exposure to issues important to undergraduate students and to observe the total learning environment. The students interviewed expressed frustration with various aspects of course registration, particularly the drop/add process. Some of their concerns were related to planning functions beyond the responsibilities of the registrar's office.

Registration is one of the only student services that virtually all postsecondary students are required to use repeatedly during their education experience. It is the primary nonclassroom point of contact between the institution and its students and, as such, is one of the most critical

elements in the success of the educational process. It is the point where the needs of the students are matched with the resources of the institution. To maximize the time they spend working toward their degrees or programs, students must have access to a registration system that provides accurate information, timely interactive scheduling functions, and the capacity to resolve most scheduling problems. Along with overseeing these processes, institutional registrars are the designated record keepers of significant amounts of information on students. These data are collected and maintained for numerous institutional, state and federal reports.

Registration in the broadest sense is composed of three major elements:

1. The processing of student course requests and the provision of a class schedule.

2. The provision of accurate information to students regarding their program requirements, course content, prerequisites and corequisites, and the appropriateness of a particular course selection for their abilities and needs.

3. The provision of a well-structured master schedule designed to meet the needs of the students and to maximize the utilization of institutional resources.

The first element is the one most frequently associated with registration and is the one for which registrars are usually held accountable when the results of the entire process are not what the student, faculty or administration desire. There is an expectation by students that registration will be an efficient, fully automated process that will produce an accurate schedule and academic record. However, no registration system can guarantee that students will receive a class schedule that meets all of their personal life style preferences. Students and faculty must be adaptable to the scheduling realities and resources of each institution.

Technological advances in the last decade have changed the way colleges and universities gather, process and present information. One area that has been significantly affected by modern technology is the registration process, as many campuses have changed their basic philosophy regarding registration systems and procedures. Advances in technology and communications, however, have not and cannot rid registration systems of all of their problems. The mechanics of registration are only one aspect of selecting and securing a course schedule that is academically meaningful and personally manageable.

Regardless of the type of registration system a university or college employs, the purpose and outcome of registration are the same. The system matches a student's request for specific courses at specific times with the availability of those courses. Whether the process is efficient, fair or serves the best interest of the student and faculty, depends on many factors. The cooperation of faculty, administration, registration personnel and students is the key to a successful registration system. Advanced planning to project how many courses and faculty will be needed to meet student demand is a crucial

component of registration. However, advanced planning is dependent on several variables including student and faculty adaptability to course scheduling.

Adequate academic advisement is an equally important component of registration. The Board of Regents, the Postsecondary Education Planning Commission and the Legislature have all recognized the important role that proper advisement has in a student's academic and future success. For the past five years the Florida Legislature has provided support for the development and implementation of computerized advisement systems designed to provide university and community college students and advisors with complete and reliable curriculum and career information. Initially funded in 1985, the Student Academic Support System (SASS), is currently being phased in throughout the State University System (SUS). The system has five components, one of which links advisement with course registration. The Student On-Line Advisement and Articulation System (SOLAR) provides curriculum and course information to community college students to aid in articulation. Currently, the use and implementation of these systems varies among institutions.

Florida is one of a handful of states that have established a statewide development team to produce software information systems at the university level. The Florida Board of Regents (BOR) produces software packages for several student information systems at the nine state universities. The registration software package is currently being used by four of the state universities. Use of the BOR software is not mandated by the State. No statewide development team supports a community college system. However, community colleges with the appropriate hardware and trained staff are eligible to use the BOR software packages free of charge.

Information technology has had a significant role in bringing about major transformations in the way institutions manage their data and particularly manage the process of registration. Yet technology does not and will not eliminate the need for knowledgeable permanent staff to provide students with accurate information, timely assistance and support in the resolution of problems. The technically sophisticated advisement and registration systems are advantageous only if they are understood and used to their maximum potential by all components of an institution.

The Commission was directed to examine the technologies used to facilitate registration, as well as the staffing, procedures and policies that comprise the entire system. To aid in that analysis, the Commission held six public meetings to allow for individual and institutional input. A preliminary draft of recommendations were disseminated to the public on January 17, 1990. Additional and modified recommendations arose as a result of public testimony and further research activities. The Planning Committee presented a final report to the Commission on February 15, 1990 for action and transmittal to the Legislature and State Board of Education by March 1, 1990.

II. REGISTRATION IN FLORIDA

Background Information

Registration processes and procedures vary considerably at Florida's 37 public postsecondary institutions. Basically, there are two major methodologies in use for matching the needs of students with the resources of the institution. These are referred to in this study as batch/sectioning and real-time scheduling. Batch/sectioning identifies any registration process that does not provide an immediate confirmation of a student's schedule. Typically batch/sectioning involves the collection of student course requests during a specified pre-registration period many weeks prior to the beginning of classes. These course requests are analyzed and appropriate adjustments are made to the master schedule. Students are then placed into classes according to a scheduling assignment based on their requests and the priorities determined by the institution. The resultant class schedules are distributed to students who have the option to alter the schedule during the drop/add period. This procedure, referred to as a demand analysis system, allows for the adjustment of the master schedule prior to any student being assigned a class schedule.

Some institutions, particularly community colleges, may use a batch method of registering special students such as vocational/technical or off-campus students. Often these special students register at off-site registration areas which are not connected to institutional mainframes or dedicated terminals. Thus, under those circumstances, immediate schedule confirmation is not possible.

Real-time scheduling involves the immediate response to a student's request for a class schedule. In this process, the student requests a class and is either confirmed in that class or is told that it is not available. The process continues until the student has a full schedule or has exhausted the alternatives. This system is analogous to an airline reservation system in that the schedule is fixed, and availability is on a first-come, first-served basis. Institutions frequently give priorities to select students (e.g. students in their last term) by assigning registration appointment times. Classes may be added or dropped after registration begins. As institutions install computers than can handle massive amounts of simultaneous transactions or desire to move to direct student input, there is a tendency to adopt a real-time method. Student consumerism and the expectation of an immediate response, as well as the availability of real-time processors and telephone registration, have led the shift away from batch/scheduling systems.

Technology has had a profound impact on the processing of student information. One of the most important developments in the last decade, interactive data input systems, has greatly changed the registration processes on postsecondary campuses. Currently, the newest of these systems, touchtone telephone registration, is increasingly replacing traditional methods of course scheduling.

The State University System

In Florida, all nine State universities use interactive (real time) data input registration systems. The type of real-time system varies, however, from campus to campus. The following three systems are currently in use.

On-line Terminal Registration

Seven of the state universities use on-line terminal registration during at least one phase of registration, i.e. advanced registration, regular registration, late registration, or drop and add registration. Usually students report at a scheduled time to a central site where a registration staff person activates a computer terminal which processes a student's request for classes. At some institutions, students can register at those academic departments which are on-line with the institution's mainframe or dedicated computer. This variation allows a student to sit with an advisor, register for classes, and immediately discuss alternatives if one or more of his choices is not available. This alternative is dependent on an extensive system of terminals and cabling from the central computer to the faculty offices.

Interactive Scanner Registration

The University of Florida uses interactive scanners instead of terminals to process a student's request for classes during regular and drop/add registration. Students report to a central site where their registration forms are fed through optical scanners for immediate processing. The University of Florida does not currently have plans to switch to telephone registration. Florida A and M University currently uses on-line terminals but will convert to touchtone telephone registration in Fall 1990. The University of West Florida has plans to convert to telephone registration as soon as resources are available.

Touchtone Telephone Registration

Currently six of the state universities use touchtone telephone registration for a least certain classifications of students (freshman, sophomores, etc.) during one or more phases of registration. Florida State University relies on telephone registration only for students during all phases of registration. Essentially, telephone registration allows a student to use any touch tone telephone to interact with the registration system. Rather than travel to a central location and interact with a clerical employee at a computer terminal, the student follows verbal instructions on the telephone to use the telephone keys to enter his course requests. The system responds verbally with the results of his request. The voice response equipment is programmed to translate the responses received from the registration system into a spoken "script" that resembles the interaction that would occur with a terminal operator, including the provision of full instructions on how to proceed. A schedule is produced which is either mailed to the student or held for pick-up. This process allows students to call from home, work, or any other location and to avoid travelling to campus to register. The institution is able to transfer the data input and verification function to the student and thus reduce the costs and frustration associated with these functions.

Because each state university is delegated responsibility for its own organization, the Board of Regents does not mandate a single uniform registration process throughout the system. Universities, however, must maintain certain standardized core data on each student which are stored at one of three statewide regional data centers. This information is used for registration, advisement, financial aid and other record keeping functions. The Board of Regents' Office of Standard Software Development Systems (SSDS) provides, upon request, a standard software registration package to universities and helps them adapt it to their indigenous needs. In addition, the SSDS staff will assist in maintaining the system by providing resources, expertise and technical skills to registration personnel.

The technical components of a registration system determines how efficiently the system will operate. The state university registrars are convinced that touchtone telephone registration has helped or will help to alleviate some of the aggravations associated with registration such as long waits in line and the necessity of traveling to a main site during normal working hours. While telephone registration can eliminate some problems an institution must have enough telephone lines to properly handle the system and avoid massive tie-ups and busy signals. Careful planning is needed before an institution switches to telephone registration to avoid the possibility of telecommunication delays and blackouts. Any decision to convert from on-line to telephone registration must first determine the capacity of the local telephone company to handle the increased user load.

Part of determining the success or failure of a registration system is to gauge the level of satisfaction of those who have to use the system. As part of the Commission's studies on registration, financial aid, and undergraduate enhancement funding, a student survey was developed by Commission staff to obtain a sample of student opinion on these subjects. Eight institutions were selected for inclusion in the survey on the basis of their ability to provide a balanced geographic and demographic profile of the state. (A list of the participating institutions, the survey instrument, a demographic profile if the respondents, and select results are included in Appendix B.)

The three universities included in the student survey all operate telephone registration. One institution, Florida State University, uses telephone registration during all phases of registration and for all classifications of students. Florida International University uses telephone registration during all phases of registration except for the late registration period. The University of Central Florida operates telephone registration only during advanced registration.

According to the survey results, 67 percent of the university respondents reported that they registered by phone for Fall 1989 classes. Twenty-five percent of the students answered that they were very satisfied with the registration process at their institution while 42 percent reported that they were satisfied. (A total of 67% of the university respondents were satisfied with their registration experience.) Thirteen percent of the respondents were neither satisfied nor dissatisfied, while 20 percent were either dissatisfied or very dissatisfied with the registration process at their institution.

Community Colleges

All 28 community colleges use interactive data input registration systems at their main campuses for degree seeking students. The most frequently used system is on-line terminal registration. Some community colleges use batch/sectioning registration to register non-degree or off-campus students. To insure adequate fiscal and administrative controls over off-campus registration, the 1989 Legislature directed the Division of Community Colleges to develop rules pertaining to procedures for registration at any off-campus site. Those rules approved by the State Board of Community Colleges on January 5, 1990, require each district board of trustees to establish adequate controls for collecting and depositing registration fees and for maintaining proper registration records.

As a coordinating board, the State Board of Community Colleges may recommend standards to the State Board of Education for the operation of each community college. The colleges then develop services and operations within those standards. The State Board of Community Colleges, however, is legislatively charged with establishing an effective information system to provide composite data about the 28 community colleges. This data base management system is under development. Currently the State Board of Community Colleges does not provide technical or personnel assistance for implementing, converting, or maintaining registration systems. The BOR's registration software package is available to interested community colleges at no cost. However, institutions must purchase their own hardware and absorb any additional conversion costs.

On-line Terminal Registration

All 28 community colleges use on-line terminal registration for at least one phase of registration. All campuses use terminals alone or as an option during regular, late or drop and add registration.

Touchtone Telephone Registration

Six community colleges currently use touchtone telephone registration. All of these institutions also use on-line terminals as an alternative to telephone registration. According to the Commission's registrar survey, ten other community colleges plan to convert to phone registration when funds are available. Costs for implementing phone registration are substantial. A conversion box (a voice response system) costs approximately $80,000 while additional terminals, speech development packages, and other administrative and technical costs add a substantial amount to the price of conversion.

Five community colleges were included in the student survey on registration, financial aid and student enhancement funding. Of these five institutions, two (Miami-Dade and Valencia) currently use touchtone telephone as well as on-line registration. According to the student survey, only 17 percent of the community college respondents used telephone registration for Fall 1989. However, 73 percent of the survey respondents were either satisfied or very satisfied with the registration process at their institution. Fifteen percent were neither satisfied nor dissatisfied, while 12 percent were either dissatisfied or very dissatisfied with the registration process at their institution.

Registration Technology

Registration systems cannot be examined in a void because those systems are dependent on and interrelated with other information technologies and system support technologies.

Relational Data Base Technology

The methodology by which data is stored and shared between systems is also changing rapidly across the nation. Data base technology has significantly changed the way that data is stored in computer systems. Currently, each system (such as registration) builds and maintains its own set of data files containing information that is needed for its operation. Independent systems frequently store the same information (such as name, address, major, etc.) creating data redundancy and disagreements between systems and offices on the correct information to be used. The addition or change of a single data element in a file creates the need to modify all of the programs that access that file. Relational data base technology allows all appropriate data to be stored in only one location and shared between systems. The means for organizing the collection of data allows each "user" to view the data in a way that is logical to that user rather than having to understand the intricacies of the systems involved. In addition, modern "fourth generation" query languages allow university officials not versed in programming languages to query the data base directly and obtain answers to their information needs promptly rather than submitting and waiting for a programming request from the Data Center. For example, rather than having the registration system, the financial aid system, the cashiering system, the housing system, etc., all maintain data on students' addresses, address data would be stored only once and all of the systems or users who needed that information would access the same information. An administrator who wanted a list of all students in a particular major who were on financial aid and lived in campus housing would be able to request such information in a natural language query without being concerned about the accuracy of the data. The University of South Florida is the only postsecondary institution that has made the commitment to develop a relational data base system. The conversion, currently underway, will take several years to complete. Financing for the adoption of the system is provided by internal funding.

Distributed Data Processing

The provision of computing power to support registration has been brought closer to the student through a process known as distributed data processing. Rather than rely on a large, central computer that is responsible for thousands of tasks, institutions have been utilizing powerful minicomputers to support the registration process on a dedicated basis. The relevant data is fed into the minicomputer prior to registration and all processing takes place locally. The results of the registration process are then fed back to the main or "host" processor at regular intervals in order to keep the master files up to date. This use of a dedicated machine for registration alone has increased the reliability of the registration process, reduced competition for host facilities, and reduced the processing costs associated with the utilization of a large mainframe computer.

Integration of functions is the bringing together of previously disparate activities into one process. The processes of registration and fee billing, for example, have been brought together with the result that the student receives a class schedule and fee bill simultaneously that shows his total liability to the institution. This has been further refined by certain telephone registration systems that have the system recite the bill, allow the student to key in an appropriate credit card number, verify with the credit card company, and complete the full registration/fee paying transaction over the phone. A further refinement links the financial aid disbursement system with this process resulting in a net check or bill for financial aid students.

In a 1989 management review conducted at one of the state universities the review team noted that the current and anticipated growth rate of the institution necessitated that the registrar's office develop a data base system that was integrated with functions conducted by related university offices (financial aid, advisement, cashier's office, etc). This recommendation is applicable to other institutions regardless of population size.

Electronic Records Transfer

As technological advances change the way universities collect and process information, they increase the responsibilities and training needs of the registrar's staff. For example, Florida's secondary and postsecondary institutions can now send student records electronically to one another via the Florida Information Resource Network (FIRN). The system, called the Florida Automated System for Transferring Education Records, or F.A.S.T.E.R. became operational and available to all school districts and public postsecondary institutions as of July 1, 1989.

Registrars at all public postsecondary institutions will be responsible for sending and receiving all student transcripts electronically by December 1, 1991. The electronic transfer of test scores such as the SAT and ACT is currently being implemented by the Board of Regents' Office of Information Resource Management.

Technology and Registration Personnel

As registration systems become more sophisticated, they in turn become easier for students to access. This "user friendly" technology has increased the demands on the registration system and staff. For instance, the ease of using touchtone telephone registration encourages students to make repeated attempts to alter their class schedule to meet individual preference. This additional use increases the need for more phone lines and for longer windows of operation. In addition, registration software contains holds or flags on a student's record to prohibit registration until an academic deficiency, unmet financial obligation or administrative requirement is met. These barriers can be removed only by a staff person in the registrar's office, which means that students must come to the office to clear their records before registering for classes.

Because registrars are also the designated record keepers at their institution, they are responsible for maintaining extensive records on their student population. Information that is required on those records is

increased or changed continuously by the Legislature. Registrars are often required to revise their software systems in the summer to comply by fall with new legislative mandates for information. Anytime a student record system is updated, additional data processing time and funds are required. Institutions often find it difficult to update a system while providing ongoing student services. An essential component of the registrar's office is maintaining a qualified, well-trained staff in sufficient numbers. According to the registrar's survey, seven of the nine university registrars reported that they did not have sufficient registration staff to adequately meet student demand. Fourteen of the 28 community college registrars reported that they did not have registration staff available in sufficient numbers to adequately meet student demand. Technology does not and will not eliminate the need for knowledgeable, permanent staff to provide students with accurate information, timely assistance and support in the resolution of problems.

Advisement

At both the universities and community colleges, successful course registration is dependent upon institutional cooperation and planning as well as student adaptability. Selecting and securing an adequate schedule of classes is the goal of every student. The success of that goal is dependent on several interdependent variables.

Legislative appropriations throughout the 1980s have included funds to improve academic and career advisement for undergraduates. The Board of Regents, the State Board of Community Colleges, the Postsecondary Education Planning Commission and the Legislature have all recognized the important role that proper advisement has in a student's academic and future success. Currently academic advisement varies from one institution to the next. Four universities and eight community colleges require that all students receive academic advising prior to registering for classes. Five universities and 16 community colleges require that certain classifications of students receive academic advising before registering. There is not a standardized method or system for advising students in operation at this time.

For the past five years the Florida Legislature has provided support for the development and implementation of computerized advisement systems designed to provide university and community college students and advisors with complete and reliable curriculum and career information. Initially funded in 1985, the Student Academic Support System (SASS), is currently being phased in throughout the State University System (SUS). The system has five components which are being implemented according to a Board of Regents (BOR) timetable. One of these components links advisement with course registration. A student first receives a degree audit which is a personalized academic record. The audit is a comparison of a student's academic history with a program's requirements. After consulting with an advisor, the student can register by on-line computer or by telephone. By using SASS, a student can avoid some of the problems of random registration. While SASS cannot increase the number of courses which are offered, it can help a student select an academically sound course schedule.

A pilot study to link SASS with registration was conducted at Florida A and M University in Fall 1989. Participating students registered as soon as they reviewed their degree audit with their advisors. This feature allowed

students to register at the same location where they received advisement rather than returning to a central registration location. Three other universities will begin using this component of SASS in Fall 1990.

As was mentioned earlier, SASS is being implemented at the public universities according to a BOR timetable. Currently, the only component of SASS which is in operation is the degree audit. The audit is a student specific record of individual academic performance and graduation requirements. The three universities included in the student survey were either in Phase I (1986-87) or Phase II (1987-88) of the degree audit phase-in. According to the student survey, 12 percent (39 of 325 respondents) were familiar with SASS while 18 university students had actually used SASS for advisement purposes.

Funds to develop the Student On-Line Advisement and Articulation System (SOLAR) for community colleges were first provided by the Legislature in 1986. The system provides curriculum and course information to aid in articulation. Each community college in Florida can access information contained in SOLAR through the Florida Information Resource Network (FIRN). SOLAR allows a student to determine the course and curriculum requirements for the most frequently selected majors at any community college in Florida. In addition, SOLAR can supply information on specific courses or other prerequisites for university degree programs. Unlike SASS, SOLAR is not a personalized record of a student's academic performance. That capacity, which is under consideration for inclusion by the State Board of Community Colleges, may be added in the future. Currently, SOLAR functions as an admissions tool as well as a non-student specific advisement instrument.

According to the student survey, 18 percent (67 students) of community colleges respondents were familiar with SOLAR while 8 percent (31 students) had used the system. Sixty-seven percent (253 students) of the respondents to the above questions were working towards an Associate of Arts degree and 21 percent (80 students) were enrolled in an Associate of Science degree program.

The Registration Process

Registrars, as well as other institutional officials across the country, identify the provision of a master schedule that is stable and adequate to meet the scheduling needs of students as one of the most crucial elements in a successful registration system. If courses are not offered in sufficient quantities and appropriate times, then no processing system can meet the scheduling needs of students. The construction of a master schedule is part of the overall planning function of the institution and is commonly viewed as one of the "givens" of the registration process.

Planning

According to the registrars' survey, university registrars unanimously agreed that planning for course scheduling could be improved at their institution. Twelve community college registrars agreed. Registrars from both sections noted that planning should be a coordinated, centralized and timely effort involving both academic and administrative departments. Several registrars recommended that institutions develop a course schedule for the entire year based on an automated demand analysis system.

The construction of the master schedule is usually seen as the academic department's responsibility and prerogative. But departments often construct their class schedules each term without the benefit of detailed forecasts or planning guidelines. The adequacy of a particular term's master schedule is highly dependent on the resources available to the institution as a whole and on the coordination of those resources and information. Many of these planning issues range far beyond what is traditionally regarded as "the registration system."

One of the biggest problems with any registration system is that some classes fill up before all of the interested students can enroll. The registrar's office does not determine how many courses and sections will be offered; such decisions are made by the academic departments. Therefore, an important ingredient of the process is for the departments to accurately anticipate how many students to expect and what courses those students will need. Because there are certain core or required courses that every student must take before graduation, individual departments can project their ability to meet those demands. That information can then be used to construct a master schedule.

Planning for the numbers and types of classes to be offered for any given semester begins at the departmental level months before the registration schedule is finalized. Each department in conjunction with the institution's chief academic officer, plans the number and types of courses which will be offered for the upcoming semester. Typically, the department bases its projections of the number of students who registered for certain classes during the last "like" semester. For example, projections for Fall 1990 classes would be based in part on the number of students who took those classes in Fall 1989. These numbers would take into account projections for the total number of students to be enrolled that semester. Throughout Florida, enrollments at both the community college and university level have increased continuously in recent years.

At the University of Florida, projections for each semester are based on a demand analysis system. During March, June, and July, students register for the courses they wish to take in a subsequent semester. An analysis of that data is submitted to the academic departments and to the university provost. This system provides departments with an immediate analysis of student preferences and gives the departments an opportunity to change course offerings in response to student requests. New sections in high-demand courses may be opened and low demand classes canceled. This system functions only as long as the departments utilize the results of the analysis and return their adjustments to the registrar's office in time for the institution's list of classes to be adjusted and for notification of revised student schedules to be mailed.

If a department notes an unusually high request for a certain course, another section can be opened only if there are additional faculty, classrooms, or times to offer that section. Often faculty and students are reluctant to meet a class offered during an early or late time period or on the weekend or evening. Thus demand analysis is an effective planning tool only if everyone affected by registration cooperates in the process. A drawback to the demand analysis system is that students who turn in their course requests in the Spring do not know until shortly before Fall semester begins if they are enrolled in the courses they requested. However, if a student lists

alternatives to his primary course requests, the options for securing a full course schedule are increased. Students who do not receive all of their course requests must participate in drop and add registration if they want a full schedule.

The utilization of the batch/sectioning demand analysis method allows for an initial look at actual student demand and thus includes the ability to adjust the master schedule prior to the actual registration of a single student. The real-time registration method requires that the schedule be locked-in prior to receiving the first student request. Real-time systems, however, can provide an early warning system as sections begin to fill so that departments can make adjustments within their capacity to meet the demand. Another element of the airline reservation analogy, over-booking of classes, is frequently utilized in order to accommodate the inevitable student drops, withdrawals, and no-shows.

Some public institutions outside of Florida have instituted fees for participating in the drop/add process (particularly drops) in an attempt to reduce the level of "frivolous" schedule changes. This again follows the airline reservation pattern with the institution of cancel/change penalties. According to BOR Rule 6C-7.003, public universities in Florida are currently prohibited from charging any additional fee not specifically included in that rule. Florida public community colleges are not prohibited from charging a fee for participating in drop/add registration. Currently, two institutions charge students a nominal fee for altering their class schedule.

Drop and Add Registration

One of the most disruptive variables in course scheduling and planning is the number of changes that occur during an institution's drop and add registration. This problem is particularly acute at the university level where thousands of drop and add transactions take place after classes have started.

Although the majority of universities allow advanced registered students to drop and add classes during several windows of operation before classes begin, all the institutions allow students to adjust their schedule during the first week of classes. The length of these drop and add periods vary by institution.

At the University of Florida, for example, students may drop and add classes only during the first week of classes. Students may drop classes during the first three days of classes and may add classes only on the fourth day. During the Fall 1989 registration period, 46,574 changes were made during the drop and add period. At Florida International University where drop and add is in operation during the first five days of classes, 18,403 classes were added during Fall 1989 while 13,101 classes were dropped. At Florida State University where students may drop and add classes during the first three days of classes, 20,317 schedule changes were made consisting of 9,850 drops and 10,467 adds. At the University of West Florida, out of a total of 7,775 total registrations, 3,200 class changes were made during the first week of classes.

Some university registrars are concerned that the number of schedule changes made during the first week of classes may limit the actual amount of instructional time a student receives. Because of the large number of students entering and leaving classes during the first week of attendance, some professors hesitate to begin actual classroom instruction until the second week of classes. Therefore, it is possible for students, even those who do not drop or add classes, to receive less than the requisite amount of instructional time required by law. In addition, liberal drop and add policies make it difficult to accurately plan for the number of classroom sections and instructors needed even if institutions use a pre-registration demand analysis system.

According to the student survey, 43 percent of the university respondents and 26 percent of the community college respondents participated in drop and add registration. When asked their main reasons for participating in drop and add, 18 percent of all students cited conflict with a work schedule as their primary reason. Twenty-two percent of all students answered that the major reason they dropped their class was that it met at an inconvenient time.

The largest number of students, 25 percent answered "other" as their primary reason for changing their schedule after they had registered. "Other" reasons for dropping the class varied and did not form a consistent response pattern. Five percent of all students said they dropped or added a course because of a failed prerequisite while three percent altered their course schedule because they changed their program of study.

Community college registrars did not identify drop and add registration as a serious problem on their campuses. As was previously mentioned, community colleges may charge a student a nominal fee for participating in drop and add registration; and some community colleges require that students pay for their classes as soon as they register or add an additional course. These policies have helped to reduce the number of drop and adds at those institutions. In an effort to cut down on the number of class time a student might miss during drop and add period, some community colleges like Florida Community College at Jacksonville have instituted a policy that does not allow students to add a class after that class has met one time. Students may drop classes during the entire first week at FCCJ.

Some community college registrars note that their classes fill up so rapidly that there are no class sections to add to replace ones that are dropped. Most community colleges attempt to add additional sections of classes during the drop and add period to meet the student demand. Because community colleges have an open admissions policy, they make maximum use of their facilities and faculty by scheduling a full range of evening, weekend and daytime classes.

Mandatory First Day Class Attendance

Related to drop and add registration's effect on the first week of classes is the issue of mandatory first day of class attendance. Although all institutions encourage first day of class attendance, only the University of South Florida has a mandatory first day of class attendance policy. Students who do not attend class on the first day are dropped from the course.

Registrars note that large numbers of students often do not attend the first or second day of class, particularly if the first day falls on a Monday. Professors are not able to determine if these students are planning to stay in the class or if they dropped the class or are planning to do so. Mandatory first day of class attendance (legitimate emergencies are considered) appears to have cut down on absences and the resulting confusion and loss of class time at the University of South Florida.

Wait-Listing

Four universities and four community colleges use what is known as a wait-list function during drop and add that allows departments to automatically or manually register students for closed class sections as seats become open. This is possible, on the one hand, if an institution uses a demand analysis system that allows students to list class preferences as primary or alternate courses. At other institutions, a student may go directly to a department and ask to be put on the wait-list. This system, not yet widely used, may help to avoid some of the problems and frustrations associated with overloaded registration systems during the drop and add period.

Future Developments

It is clear that information technology has had a significant role in bringing about major transformations in the way institutions manage their data, and manage the process of registration. According to the study consultant, Dr. William Younkin, these changes may be relatively tranquil compared to the transformations on the horizon in computers and information systems.

Human interface technologies, or "user-friendly" interfaces and technologies (such as voice response telephone registration) that place direct involvement with the system in the hands of the end user will continue to expand and transform the way students and administrators interact with the registration system. In addition, expert systems and other management science approaches can be developed to integrate the data contained in the advising system, historical records, and admissions data and provide optimized recommendations for the development of a master schedule.

Communication technologies, along with the development of "intelligent terminals" (such as PC's), will continue to distribute access and computing power closer to the user. Students and advisers will have the ability to make inquiries from a variety of input and output devices and will have access to a growing amount of information. Registration itself, currently bound to a single processor, may in large part be decentralized to a PC network where the actual processing and printing of schedules and bills, a current source of central processor overload, will be distributed across the network.

A significant number of college and university information management experts responded in a national survey* that they planned to develop their information systems (including registration, advising, master schedule, etc.) utilizing a relational data base. With the use of these technologies, institutions will be able to put systems together in a much more useful and effective way.

The result of these developments will be to more effectively provide planning information to academic leaders for the construction of a optimal master

schedule, provide progress and course information to students for better personal scheduling decision making, and permit easier access to and use of the registration processing system.

* To be published in, **Communications of the Association for Computing Machinery**, Winter 1990.

III. STATE LEVEL INVOLVEMENT IN CAMPUS REGISTRATION SYSTEMS

A national review of college and university administrative information systems has found few states that have mandated a centralized approach to the registration process and to student information systems in general. In addition to Florida, the states that were identified as having been involved in some level of statewide coordination were: California, Tennessee, Colorado, Maine, North Carolina and New York. A majority of state university systems do not have an organizational structure that would foster statewide involvement in this area.

State involvement in the administrative information systems of a campus typically is at the level of the total student records system. Other than Florida's implementation of the SASS system of student advisement, there has been little effort to isolate and coordinate the registration processing function at the state level.

The only states to mandate implementation have been the smaller state systems of Tennessee and Maine. Larger, more complex state systems have provided a student records system and made implementation optional.

California

Like the State University System of Florida, the California State University (CSU) system has established statewide development teams to produce administrative systems software for their universities. The CSU system has a central operation that serves as an internal software developer and provider for its 20 campuses and provides optional support for all components of the student records system on each campus. Seven of the 20 campuses utilize a common on-line registration system. Personnel from the seven campuses were actively involved in the development of the software for the system that met the needs of the individual campuses and satisfied the standardized reporting requirements of the State. Three of the campuses joined together and separately contracted with an outside vendor for a student records system, including registration software. Three of the seven campuses have acquired software to implement a telephone registration system and the other campuses are planning for such a system.

The CSU system also offers software to the campuses to support the student advising function. Using a complete academic record, real-time transcripts and academic record working reports are made available to faculty and their students. Certain CSU campuses also offer public access terminals that allow enrolled students to review and verify their current registration information. There is no centralized approach for the nine campuses of the University of California system. Each campus has developed a student records system to meet it's individual needs.

Tennessee

The Tennessee University System includes six regional universities and fourteen community colleges. This system is the only system that has included its community colleges in a common student records system. The University of Tennessee system, however, is not included in this system.

The state implemented a common on-line computer system in 1983 with a gradual phase-in of all institutions. The initial programs were designated for payroll, personnel and other business functions. At this time, fourteen institutions have implemented an on-line registration component of their student data system. Following master schedule programming, students may register for courses throughout the year. The State provides maintenance support for the system as well as software guidance.

A number of campuses are currently planning for the implementation of a telephone registration system. In the near future, the Tennessee system plans to explore student-initiated registration through individual computer stations where students with access (PIN number, etc.) will be able to directly interface with the registration system. The University of Tennessee system continues to develop its own on-line registration system and is attempting to coordinate a standardized system for all of its branches.

Maine

The University of Maine system consists of seven campuses and approximately 33,000 students. In 1987,the State system created a "user" committee with membership from all campuses in order to examine the computer needs, both competitive and cooperative, of the seven campuses. Following input from all campuses, the State purchased the Integrated Student Information System (ISIS) and a data base management system to serve as a core for the integration of all information systems. ISIS has been implemented and coordinated on all seven principal campuses so that all major administrative systems are standardized. In essence, the system operates as one university, and campuses are prohibited from the purchase of stand-alone software systems for their administrative functions.

Through ISIS, all campuses offer on-line registration to their students where terminals are available in various department offices to enable students and faculty together to review academic programs and develop a registration schedule. The State system is assisting the seven campuses to plan for the implementation of telephone registration systems.

North Carolina

In 1983, the University of North Carolina System purchased software for a standardized accounting system. In recent years, software has been made available to the 16 system institutions on an optional basis for personnel, payroll and financial aid support. The State system has also purchased a student records system that has been implemented at ten of the 16 universities in the system, but has not been implemented at the large, research universities of N.C. State University and the UNC-Chapel Hill. These institutions feel that the existing system is inadequate to meet the size and complexity of their campus. There is no common hardware or software requirements for the student records systems of the campuses. N.C. State has implemented telephone registration this year, and UNC-Chapel Hill is planning to implement a similar system in the next two years.

New York

In the State University of New York (SUNY) system, there is no centralized system for campus student records. The State does offer assistance in negotiating hardware systems for the campuses and also provides recommended options for software packages. Most of the campuses are in the process of acquiring new mainframe vendors as a result of a State assistance. Thirteen of the campuses have identified common needs and are planning to purchase a common student records system. Most campuses support the existing autonomy that they have in making these decisions.

Georgia

The University System of Georgia provides support for their statewide Student Information Records System (SIRS). SIRS is a statewide data base for students that enables the state institutions to submit and jointly utilize comparable student record information. While the State system provides support for vendor presentations on hardware and software options during state registrar, admissions, and business affairs meetings, the campuses have purchased registration software packages based on their specific campus needs. The State system is also coordinating an electronic mail system for its campus registrars and admissions staff that is centered at Georgia College in Milledgeville and utilizes 800 telephone numbers for transmittal.

Individual campuses, particularly Georgia State University and smaller campuses like Floyd College, have successfully implemented a telephone registration system. A number of other State institutions are planning for such a system.

Summary

The state systems that were reviewed identified the following advantages to state level involvement and coordination of campus student records systems:

- greater efficiency in system development; reduced duplication;
- coordination of sources of assistance by other state development teams as well as vendors;
- implementation of new technology;
- consistency among campuses;
- common data elements;
- improved student flow;
- reduced maintenance costs.

In discussions with campus administrators, the following disadvantages were identified:

- conversion to a common system can be expensive;
- inability to address the diversity of campuses within a system;
- difficulty to accommodate the individual needs of a campus.

A majority of states that have become involved in providing support for their campus student records systems are simply providing a common set of software that each institution can voluntarily utilize at its discretion. Regional state institutions tend to be more supportive of and realize greater benefit from state involvement in providing a common student records system. The large, comprehensive research universities tend to develop and implement a records system specifically designed for the size and complexities of their campus(es).

IV. ISSUES AND RECOMMENDATIONS

Registration Systems

The central issue underlying this study is whether the public postsecondary institutions in Florida are maximizing their resources, both human and technological, to provide the most efficient and accurate registration systems and procedures possible. The Commission found that, in general, Florida's higher education institutions are in the forefront of information management and services. The recommendations that follow are designed to help institutions improve the technical, advisement and planning components of their registration systems.

Registration is one of the only student services that all postsecondary students are required to use multiple times during their education experience. It is a system that is dependent on the cooperation of numerous institutional components including the faculty, administration, information management experts and students. To be successful, that is to match the academic needs of the student with the resources of the institution, a registration system must include beneficial academic advisement and cooperative planning and management of the institution's fiscal, physical and human resources. In addition, the willingness of students and faculty to attend and teach classes beyond the normal scheduling hours in part determines whether an institution can maximize their resources to more adequately meet the demands of a steadily increasing student population.

Although the technical components of registration are only one part of the system, they in large part determine how efficiently that system will operate. All of Florida's 37 public postsecondary institutions register degree seeking students by using a methodology known as real-time scheduling. Simply stated, real-time scheduling allows students to get an immediate response to their class schedule requests. There are three real-time systems in use in Florida: on-line terminal registration, interactive scanner registration, and touchtone telephone registration. Six universities currently use touchtone telephone registration, as do six community colleges. One university will adopt telephone registration in Fall 1990, and one in the near future. Ten additional community colleges plan to switch to telephone registration as soon as possible.

Touchtone telephone registration is considered by experts as the "state of the art" in registration systems. There is no evidence, however, that that system should be mandatory for every postsecondary institution. While telephone registration has eliminated many of the aggravations associated with course scheduling, such as traveling to a central registration area, limited registration time periods, and long waits in line, it is not without problems which are indigenous to the system. If a registration telephone system does not have enough lines to prohibit massive tie-ups and busy signals, then frustration and waiting can be as intense as the more traditional systems. Most institutions that use telephone registration also have on-line terminals as a back up, or limit telephone registration to certain classifications of students or to certain phases of registration.

Converting to or adopting any new registration system is costly. Particularly expensive is the hardware which is necessary to operate the system. For instance, an institution interested in converting from an on-line terminal registration system to a touchtone telephone system would have to purchase a conversion box which costs approximately $80,000. In addition, institutions must pay for other data processing functions as well as additional technical and personnel resources.

Florida is one of a handful of states that have established a statewide development team to produce software information systems at the university level. The Florida Board of Regents (BOR) produces software packages for several student information systems at the nine state universities. Use of the registration software is not mandated by the State. Four of the state universities currently use the BOR software package and two have plans to use it when they convert to telephone registration. No statewide development teams support a community college system.

The advantages of adopting a state system-wide approach to registration processing include: (1) cost savings from reduced duplicated development costs at each campus as well as efficiency in software development; (2) consistency among campuses using a single registration system; (3) support in moving to new technology; and (4) reduced maintenance costs.

The identified disadvantages of a state system-wide approach are: (1) initial development/purchase cost as well as conversion costs on each campus. If these are not sufficiently funded, the effectiveness of the system will be seriously affected; and (2) difficulty in the accommodation of major regional differences among campuses with specialized features or unique missions.

Recommendation:

1. **The Board of Regents' Office of Standard Software Development Services (SSDS) should continue to provide voluntary assistance to universities as they develop and maintain their registration software systems.** That office, along with state communications experts and the local telephone company, should coordinate the conversion and implementation of telephone registration at any public university.

Careful planning is needed before an institution switches to telephone registration. The capacity of the local telephone company to handle the increased user load should be a determining factor in <u>any</u> institution's decision to convert to telephone registration.

Recommendation:

2. **To avoid possible telecommunication problems, public community colleges should provide advanced notice to the local telephone company, state communications experts and the SSDS before converting to touchtone telephone registration.**

Although the state university system's registration software package was developed for use by participating universities, that information system is available for adaptation by Florida's public community colleges which have the

appropriate hardware. Currently only six community colleges offer touchtone telephone registration; however, ten more community colleges have plans to adopt telephone registration when funds and personnel are available. The diversity, size and regional differences among the community colleges mitigate against a single standard software system for registration, however, colleges which share demographic similarities might benefit from developing and implementing a standard software system.

Recommendation:

3. **Community colleges should be encouraged to work together through regional consortiums to develop registration software that is applicable to their needs.** The State Board of Community Colleges should assist these colleges by providing ongoing support for software adaptation and implementation. The software developments of the Board of Regents Office of Standard Software Development Services should be made available on a voluntary basis to public community colleges.

Each postsecondary institution in Florida maintains independent data systems that store and share similar information. The existence of these multiple systems can create data redundancy conflicts between systems and offices on the correct information to be used. The addition or change of a single data element in a file creates the need to modify all of the programs that access that file. Relational data base technology allows all appropriate data to be stored in only one location and shared between systems. Each user can then view the data in a way that is logical to that user rather than having to understand the intricacies of all the systems involved.

The conversion of an institution's data systems to a relational data base environment is a significant undertaking. In addition to the need for data base management software at the host computer, training of data center personnel, and program and file conversion support, great pressure is placed on the understanding and accuracy of the institution's current data files. According to the study consultant, however, there are significant benefits to such a conversion, particularly in the areas of ease of use, flexibility, ease of extracting information, and clarity and accuracy of information. A relational data base system allows managers to access the information they need without requiring the knowledge of complex programming languages. The move to a relational data base environment is felt to be advantageous by the Information Resource Management Office of the SUS as well as by many institutional computer center staffs and registrars. As was mentioned earlier, the University of South Florida is the only postsecondary institution that has begun a conversion to a relational data base system. That system will not be in complete operation until the mid 1990s.

Recommendation:

4. **During the development and planning process, the University of South Florida's conversion to a relational data base system should be closely monitored by the Board of Regents and the State Board of Community Colleges to determine its effectiveness.** If warranted by the results of this effort, the

two boards should consider approaches for the development of a prototype relational data base system for other public postsecondary institutions.

Registration Staff

Advances in information technology have revolutionized the mechanics of registration while increasing the need for highly skilled registration personnel. Technically trained staff are necessary to ensure that registration systems are effectively managed. At the same time, staff must continue to personally interact with students to provide assistance, support and help in the resolution of problems. In the Commission's registrar survey, seven of the university registrars and fourteen of the 28 community college registrars reported that they did not have registration staff available in sufficient numbers to adequately meet student demand. The need to have enough staff members who are sufficiently trained to meet the varied responsibilities and needs of the registrar's office should be a priority of each postsecondary institution.

Recommendation:

5. **Each public postsecondary institution should provide ongoing inservice education for registration staff.** Additional training could be provided during the annual meeting of the Florida Association of Collegiate Registrars and Admissions Officers (FACRAO). This forum should provide information on and training in all the components of registration systems as well as provide an opportunity for knowledge sharing and networking among postsecondary registrars.

Advisement

The purpose of any registration system is to ensure that students will select and secure a course schedule that is academically meaningful and personally manageable. Registrars agree that one reason that students end up with a course schedule that is neither of the above is that they do not receive adequate academic advisement. To increase the likelihood that students are advised before they register for their classes, the legislature has provided funding for the last five years for the development and implementation of computerized advisement systems. (Please see the Commissions' 1989 study on **The Impact of Undergraduate Enhancement Funding** for a complete discussion of this issue.)

While it might be too early to evaluate the success or failure of the SUS' Student Academic Support System (SASS) and the community colleges' Student On-Line Advisement and Articulation System (SOLAR) it is clear that relatively few postsecondary students are utilizing either of these systems. For instance, the Commissions' student survey revealed that only 12 percent of the university respondents were familiar with SASS while 18 percent of the community college respondents were familiar with SOLAR. There is not a consensus for marketing, distributing or using SASS or SOLAR on individual campuses.

Recommendation:

6. **The Board Of Regents and the State Board of Community Colleges should continue to strongly encourage public postsecondary institutions to provide students and counselors with access to, knowledge of, and training in how to properly use the Student Academic Support System (SASS) and the Student On-Line Advisement and Articulation System (SOLAR).**

Planning

One of the most crucial elements of a successful registration system is the development of a realistic master schedule that is adequate to meet student demand. The construction of the master schedule begins at the departmental level. Each department, in conjunction with the institution's chief academic officer, plans the number and types of courses that will be offered for the upcoming semester. This information is given to the registrar who designs the master schedule. Projections of the number of students who will be registering for classes is typically based on the numbers enrolled during the last "like" semester. This method of forecasting can cause problems in a postsecondary system where the enrollment continues to grow. In Fall 1989, the SUS experienced a 7.3 percent overall increase in actual students over the planned enrollment. Projecting the number of upper division students is complicated by State policy (Board of Regents Rule 6C-6.004) that requires public universities to accept all transfer students with an associate of arts degree "within curriculum, space, and fiscal limitations." Such limitations have resulted in a growing number of limited access programs by universities faced with burgeoning enrollments at the upper division level. For example, transfer students with an A.A. degree who wish to attend the University of Florida must be accepted into a specific college before they can permanently enroll at that institution.

Community college FTE enrollment is expected to grow by 8.8 percent statewide in 1989-90. Projections for enrollment at the community college level are for continued growth. In addition, community college enrollment pressures increase as university admissions are constricted.

The Commission's survey revealed that all university registrars and a majority of community college registrars agree that planning for course scheduling could be improved at their institution. While technology has helped to increase communication between different sectors of an academic institution, no sophisticated registration or planning system can compensate for an undersupply of class sections resulting from a shortage of instructors or classroom facilities. At the same time, institutional resources can be maximized by greater student and faculty adaptability to an expanded course schedule. In short, the traditional time and days that classes are offered should be expanded to meet demand.

Advances in communications technology can help to solve some institutional planning problems. For instance, the Student Academic Support System (SASS) is a student specific record of what each university student has taken and needs to complete prior to graduation. An analysis of these records can help departments decide how many course sections to offer to meet the graduation

requirements of currently enrolled students. By analyzing the schedule projections of each academic department or college, the registrar's office could devise a more realistic and accurate master schedule for the entire institution.

Recommendation:

7. **To increase the accuracy of course planning and scheduling, all institutions within the State University System should use the Student Academic Support System (SASS) to help predict what courses, how many sections, and how many instructors will be needed for each semester to meet student demand.** Institutions should encourage each school or department to submit a yearly class schedule forecast to the chief academic officer and campus registrar. These forecasts will enable registrars to construct a more realistic and meaningful master schedule.

Approximately 45 percent of the upper division student population at Florida's universities are community college transfers. Because Florida law ensures all associate of arts students admission into the State University System (not necessarily into the institution of their choice) upper division level enrollment is constantly increasing beyond the progression of native students. While community college students are encouraged to apply for upper division admission well in advance of transferring, universities do not have an accurate early warning of how many transfer students to expect each semester. This is especially true of institutions with few or no limited access programs.

As was mentioned earlier, the community college's Student On-Line Advisement and Articulation System (SOLAR) is not student specific. This system also serves as an admissions tool as it allows high school and community college students to determine what courses they will need to take to satisfy a particular area of study at any Florida community college or university. Because SOLAR is not programmed as a planning system, universities have not been able to use it to estimate how many transfer students they might expect to enroll.

Recommendation:

8. **As one mechanism to help universities better prepare and plan for community college transfers, the State Board of Community Colleges should modify the Student On-Line Advisement and Articulation System (SOLAR) to allow community college students to electronically request and receive an application for admission to one or more specific state universities.** Requests would be transmitted electronically to the universities thus providing administrators with an earlier gauge of student demand.

Planning Issues

Institutional planning is an ongoing feature of registration and class scheduling. Such planning can be jeopardized, however, by a number of variables that may occur after the registration process begins. One of the

most disruptive variables in course scheduling and planning is the number of changes that occur during drop and add registration. This problem is particularly acute at the university level where thousands of drop and add transactions take place after classes begin. Registrars note that the ease with which students can drop and add classes have added to the magnitude of the problem. Although drop and add can be a problem on community college campuses, it is mitigated by the demand for courses and by state policy that permits those institutions to charge a fee for drop and add transactions. Currently, two community colleges charge such a fee.

Because of the large number of students entering and leaving university classes during the first week of attendance, actual classroom instruction is often delayed until the second week of classes. It is therefore possible for students to receive less than the requisite amount of instructional time required by law (SBE Rule 6A-10.033; BOR Rule 6C-8.001).

The majority of universities allow pre-registered students to drop and add classes during several windows of operation before classes begin, thus, the number of legitimate schedule changes during the first week of classes could be reduced.

Recommendation:

9. **To minimize the number of unnecessary drop and add transactions at State universities during the first week of classes, Board of Regents Rule 6C-7.003 should be amended to allow universities to charge a fee for drop and add transactions that take place after the first day of classes.** In addition, universities should be allowed to raise the current $25.00 late registration fee to discourage students from registering after classes have begun.

Currently all public colleges and universities encourage first day of class attendance. However, only the University of South Florida enforces that policy by dropping students from the class role for non-attendance. This practice has been in effect since 1982. At Florida Community College at Jacksonville, students may not add a class after that class has met for the first time. Registrars note that large numbers of students often do not attend the first or second day of class, particularly if the first day falls on a Monday. Professors are often unable to determine if absent students are actually planning to stay in the class or if they have officially dropped the course. Students wishing to take a particular course or section might be denied entry to the course because of overload expectations. At the University of South Florida mandatory first day attendance has helped to cut down the number of empty seats in classes that are not, in reality, operating at full capacity. This policy is particularly valuable in high demand courses with limited space and seating capacity.

Recommendation:

10. **All postsecondary institutions should consider adopting a mandatory first day of class attendance policy to avoid vacant seats and a loss of class time.** Provisions for legitimate emergencies and extenuating circumstances should be written into each institution's policy.

Board of Regents Rule 6C-7.002 allows university students to pay for their classes on the last day of drop and add registration. In contrast, many of the community colleges require that students pay for classes as soon as they register. Registrars at those institutions note that the policy has reduced the number of drop and add transactions on their campuses. Students who pay tuition fees early are more likely to make schedule changes for academic or work related reasons. With thousands of drop/add transactions taking place on university campuses during the fist week of classes, early fee payment might help stabilize the process by eliminating unnecessary or frivolous class changes.

Recommendation:

11. **Board of Regents Rule 6C-7.002 should be amended to allow universities to require that students pay tuition and registration fees before the first day of classes.** Financial aid students should continue to be eligible for an automatic fee deferment.

Conclusion

Advances in information technology have brought about major changes in the way institutions manage their data, and particularly manage the process of registration. The systems and procedures in operation today, however, will undoubtedly be refined or modified in the near future. The changing nature of communication technologies and system support technologies will require an ongoing commitment by the State to keep Florida's postsecondary institutions at the forefront of information management and service. At the same time, postsecondary institutions should strive to strengthen their personnel resources and planning methods to ensure that all registration systems operate at maximum efficiency and effectiveness.

APPENDIX A

Selected Results of Surveys of Public Postsecondary Registrars

POSTSECONDARY EDUCATION PLANNING COMMISSION
REGISTRAR SURVEY

In August 1989, Commission staff distributed a survey questionnaire to all 37 public postsecondary registrars. The survey was designed to collect data on registration systems in use at Florida's public postsecondary institutions and to ascertain the opinions and concerns of the State registrars. A 100 percent response rate was obtained. To gather additional information pertinent to the study, a follow-up survey was distributed to the community college registrars at the October 2nd meeting of the Florida Community College Registrars and Admissions Officers. A 57 percent response rate was obtained. A similar follow-up survey was mailed to the nine university registrars in October. A 100 percent return rate was received. A copy of the surveys and selected results are included on the following pages.

POSTSECONDARY EDUCATION PLANNING COMMISSION

REGISTRAR SURVEY
August 1989

Name _____ Institution _____

Title _____ Phone Number _____

Directions: As part of the Commission's legislative study of registration at public community colleges and universities, all registrars are being asked to complete this survey. Your contribution of 10 to 15 minutes to complete this survey will be appreciated.

1. What type of registration system for students does your institution currently use for:

   (a) Early or advanced registration (please check all that apply)

   _____ phone _____ on-line terminal _____ batch

   _____ combination (Please describe)_____

   _____

   _____

   (b) Regular registration

   _____ phone _____ on-line terminal _____ batch

   _____ combination (Please describe)_____

   _____

   _____

   (c) Late Registration

   _____ phone _____ on-line terminal _____ batch

   _____ combination (Please describe)_____

   _____

   _____

   (d) Drop and Add Registration

   _____ phone _____ on-line terminal _____ batch

   _____ combination (Please describe)_____

   _____

   _____

2. Is pre-registration advisement <u>available</u> for <u>all</u> students at your institution?

_____ Yes _____ No

3. Is pre-registration advisement <u>required</u> for <u>all</u> students at your institution?

_____ Yes _____ No

(If **yes**, please move on to question 5.)

4. (a) Is pre-registration advisement <u>required</u> for <u>any</u> students at your institution?

_____ Yes _____ No

(If **no**, please move on to question 5.)

(b) Is pre-registration advisement required for: (please check any that apply)

_____ Freshman only

_____ First time in college (FTIC) students

_____ Students in certain disciplines

_____ Students requesting certain courses

_____ Graduate students

_____ Others, please explain _____

_____

5. What impact, if any, has either the Student On-line Advisement and Articulation System (SOLAR) or the Student Academic Support System (SASS) advisement systems had on registration at your institution? _____

_____

_____

6. (a) Are registration staff available in sufficient numbers to adequately meet student demand?

_____ Yes _____ No

(b) If no, do you hire temporary employees?

_____ Yes _____ No

7. Is registration available at convenient times to adequately meet student demand?

_____ Yes _____ No

8. Are registration staff adequately trained to assist in all registration procedures?

_____ Yes _____ No

9. Does your institution have plans to change or convert its current registration system?

_____ Yes _____ No

If **yes**, what system will you adopt and when? _____

_____

10. Are you satisfied with the registration system currently in use at your institution?

_____ Yes _____ No

(If **no**, please move on to question 11.)

11. (a) If **no**, what are the biggest problems with your registration system? (Please include all areas of your system including staffing, technology, procedures and funding.)_____

_____

_____

_____

_____

(b) How could some of these problems be eliminated? _____

_____

_____

_____

_____

By August 31, 1989

Return to:

Dr. Glenda A. Rabby
Educational Policy Analyst
Postsecondary Education Planning Commission
121 Knott Building
Tallahassee, Florida 32399

Thank you for completing this survey.

FOLLOW-UP QUESTIONS TO UNIVERSITY REGISTRAR SURVEY

Name _____ Institution _____

Title _____ Phone Number _____

1. (a) Does your registration system include a wait-list function for students waiting for filled class sections?

_____ yes _____ no

(b) If yes, is it an automated or manual function?

_____ automated _____ manual

2. What "holds" or "flags" are part of your registration clearance? (please check all that apply)

_____ admitted _____ Financial

_____ CLAST _____ Judicial

_____ Gordon Rule _____ Prerequisites

_____ Immunization _____ Corequisites

_____ Other (Specify) _____

_____

_____

3. How does your institution plan ahead for the numbers and types of courses which will be offered each semester?

_____

_____

_____

4. (a) Could planning for class scheduling be improved at your institution?

_____ yes _____ no

(b) If yes, please explain. _____

_____

_____

FOLLOW-UP QUESTIONS TO COMMUNITY COLLEGE REGISTRAR SURVEY

Name _____ Institution _____

Title _____ Phone Number _____

1. (a) Does your registration system include a wait-list function for students waiting for filled class sections?

_____ yes _____ no

(b) If yes, is it an automated or manual function?

_____ automated _____ manual

2. What "holds" or "flags" are part of your registration clearance? (please check all that apply)

_____ admitted _____ Financial

_____ Placement Scores _____ Judicial

_____ Academic Advisement _____ Prerequisites

_____ Immunization _____ Corequisites

_____ Other (Specify) _____

_____

_____

3. How does your institution plan ahead for the numbers and types of courses which will be offered each semester?

_____

_____

_____

4. (a) Could planning for class scheduling be improved at your institution?

_____ yes _____ no

(b) If yes, please explain. _____

_____

_____

POSTSECONDARY REGISTRAR SURVEY, AUGUST 1989
SELECTED RESULTS (STATE UNIVERSITY SYSTEM)

N = 9

Q-1. What type of registration system for students does your institution currently use for:

		Phone	On-line terminal	Batch	Combination
(A)	Early Registration	4	5	0	2
(B)	Regular Registration	3	7	0	2
(C)	Late Registration	2	7	0	2
(D)	Drop/Add Registration	4	7	0	2

Note: Six universities use touchtone telephone registration for at <u>least</u> one phase of course registration. Two universities use for all four phases.

Q-2. Is pre-registration advisement <u>available</u> for <u>all</u> students at your institution?

Yes - 9 No - 0

Q-3. Is pre-registration advisement <u>required</u> for <u>all</u> students at your institution?

Yes - 4 No - 5

Q-4. Is pre-registration advisement <u>required</u> for <u>any</u> students at your institution?

Yes - 5 No - 0

Q-6. Are registration staff available in sufficient numbers to adequately meet student demand?

Yes - 2 No - 7

Q-9. Does your institution have plans to change or convert its current registration system?

Yes - 7 No - 2

Note: Yes answers include universities which plan to update their current system.

POSTSECONDARY REGISTRAR SURVEY, AUGUST 1989
SELECTED RESULTS (COMMUNITY COLLEGES)

N = 28

Q-1. What type of registration system for students does your institution currently use for:

		Phone	On-line terminal	Batch	Combination	N/A
(A)	Early Registration	6	27	5	4	
(B)	Regular Registration	5	28	3	3	
(C)	Late Registration	2	27	2	3	1
(D)	Drop/Add Registration	4	28	2	3	

Note: Six community colleges use touchtone telephone registration for at least one phase of registration.

Q-2. Is pre-registration advisement <u>available</u> for <u>all</u> students at your institution?

Yes - 28 No - 0

Q-3. Is pre-registration advisement <u>required</u> for <u>all</u> students at your institution?

Yes - 8 No - 19 Missing - 1

Q-4. Is pre-registration advisement <u>required</u> for <u>any</u> students at your institution?

Yes - 16 No - 3 Missing - 9

Q-6. Are registration staff available in sufficient numbers to adequately meet student demand?

Yes - 14 No - 14

Q-9. Does your institution have plans to change or convert its current registration system?

Yes - 12 No - 16

FOLLOW-UP QUESTIONS TO REGISTRARS' SURVEY

Universities - N = 9
Community Colleges - N = 16

Q-1. (a) Does your registration system include a wait-list function for students waiting for filled class sections?

	University	Community College
Yes	4	4
No	5	12

(b) If yes, is it an automated or manual function?

	University	Community College
Automated	2	2
Manual	2	2

Q-4. (a) Could planning for class scheduling be improved at your institution?

	University	Community College
Yes	9	12
No	0	3
Missing	0	1

APPENDIX B

Results of Survey of Students in
Public Community Colleges and Universities

POSTSECONDARY EDUCATION PLANNING COMMISSION
STUDENT SURVEY

The 1989 Legislature directed the Commission to examine a number of student-focused issues. These issues were highly related in terms of student campus experiences: Registration, Advisement, and Financial Aid. In order to meet the various studies' requirements efficiently and appropriately as well as provide for student evaluation of selected services, a single survey questionnaire was developed by Commission staff with assistance from institutional and State administrators as well as local practitioners. The student survey was conducted to obtain a sample of the opinions of undergraduate students in Florida's public community colleges and universities. The following section describes the procedures used to collect the data and survey results. Raw data in tabular form relevant to this particular study are displayed in attached tables.

Student Sample

Eight institutions were selected for inclusion in the survey on the basis of their ability to provide a balanced geographical and demographic profile of the state. The institutions included were: 1) Miami-Dade Community College, 2) North Florida Community College, 3) Edison Community College, 4) Valencia Community College, 5) St. Johns River Community College, 6) Florida International University, 7) Florida State University, and 8) the University of Central Florida. Based on 1987-88 data, 62 percent of Florida's total public postsecondary FTE enrollment was enrolled in the Community College System (CCS) while the remaining 38 percent was enrolled in the State University System (SUS). This proportional distribution was retained in the sample. The size of the student sample at participating institutions was determined on the basis of the total student FTE enrollment each contributed to the student sample. Table 1 illustrates the percent of FTE enrollment each institution contributed to the total as well as the number of surveys distributed for completion. Because the FTE enrollment was lower than expected at both St. Johns River Community College and North Florida Community College, the number of surveys distributed was doubled to increase the validity of the sample. In the analysis of the results, a statistical weight was assigned to the surveys collected from these two institutions to compensate for the extra number distributed. A total of 1031 surveys were distributed among the eight participating institutions; a 77 percent response rate was obtained.

Survey Instrument and Procedures

The student questionnaire was divided into four sections covering basic demographic information and questions about registration processes, class size and advising, and financial aid. Most of the questions required a forced choice response. A few items offered students an opportunity to clarify or write their own response. The questions included on the draft survey were created by Commission staff based upon relevant issues suggested by the legislative charge or the background literature.

TABLE 1

SURVEY DISTRIBUTION

INSTITUTION	FTE ENROLLMENT	PERCENT OF FTE ENROLLMENT	NUMBER OF SURVEYS DISTRIBUTED	NUMBER OF SURVEYS RETURNED
Universities				
Florida International	8,900	25	94	84
Florida State	16,300	47	177	155
Central Florida	9,800	28	105	96
Total	35,000	100	376	335
Community Colleges				
Edison	3,300	8	50	26
Miami-Dade	27,500	67	387	260
North Florida *	900	2	12	12
St. Johns River *	1,300	3	19	31
Valencia	8,100	20	125	130
Total	41,200	100	624	459
Total				
State Universities	89,157	38	376	335
Community Colleges	144,866	62	624	459

*Actual number of surveys distributed was 24 at North Florida and 38 at St. Johns River. A statistical weight was used to compensate for the additional number in the data analysis.

A preliminary draft of the survey instrument was circulated among staff of the Board of Regents, the State Board of Community Colleges, the State Council of Student Body Presidents, and the participating institutions. In addition, the instrument was reviewed by individuals with expertise in survey research methodology. A copy of the final survey instrument is appended. The revised survey instrument was pilot tested at Florida State University in September. Commission staff coordinated with the Vice President for Academic Affairs or the Director of Institutional Research at participating institutions in the distribution and completion of the questionnaires. The survey process involved day and evening as well as upper and lower division classes in business, English and mathematics.

The survey data was analyzed using the Statistical Package for the Social Sciences, (SPSSX). Descriptive statistics such as frequency distributions and percentages for each question and response category were calculated. Further investigation into the differences between the responses of different categories of students as well as universities and community colleges was conducted when warranted.

Institution_____
Class Prefix/Number_____
Class Hours_____

POSTSECONDARY EDUCATION PLANNING COMMISSION
STUDENT QUESTIONNAIRE
1989-90

Directions: Please read and complete each item carefully. Check [ ] only one response unless otherwise indicated. Thank you for your response to this questionnaire.

1. Gender: [ ] Female [ ] Male

2. Class status: [ ] Freshman [ ] Junior [ ] Graduate level
   [ ] Sophomore [ ] Senior [ ] Other

3. Degree you are currently working toward:

   [ ] AA [ ] Bachelor's [ ] Doctorate [ ] Certificate
   [ ] AS [ ] Master's [ ] Other (Specify)_____

4. Your age: [ ] Below 17 [ ] 25-33 [ ] 45-64
   [ ] 17-24 [ ] 34-44 [ ] Over 64

5. Your current grade point average: [ ] Below 2.00 [ ] 3.00-3.49
   [ ] 2.00-2.49 [ ] 3.50-4.00
   [ ] 2.50-2.99 [ ] Unknown

6. Race: [ ] White Non-Hispanic [ ] Asian American/Pacific Islander
   [ ] Black Non-Hispanic [ ] American Indian/Alaskan Native
   [ ] Hispanic [ ] Other (Specify)_____

7. Are you an in-state or out-of-state resident?

   [ ] In-state [ ] Out-of-state/not U.S. citizen
   [ ] Out-of-state/U.S. Citizen

8. For financial aid purposes, are you considered dependent on your parents?

   [ ] Yes [ ] No [ ] Don't know

9. Is English your native language? [ ] Yes [ ] No

10. How many semester credit hours are you currently taking?

    [ ] 1-6 [ ] 7-11 [ ] 12-15 [ ] over 15

11. (a) Are you currently employed? [ ] Yes [ ] No **If No**, move to Question 12.

    (b) **If Yes**, are you working over 20 hours a week? [ ] Yes [ ] No

12. (a) Are you a transfer student?

    [ ] Yes [ ] No **If No**, move to Question 13.

(b) What type of institution did you transfer from?

[ ] Florida public university [ ] Florida public community college
[ ] Florida private college or university [ ] Other (Specify)_____

13. Are you a disabled student? [ ] Yes [ ] No

Registration and Advisement

14. When did you register for your Fall 1989 classes?

[ ] Advanced registration (Spring or Summer 1989)
[ ] Regular registration (before classes began) Fall 1989
[ ] Late registration Fall 1989

15. **Please answer the following question if you are a state university student.**

(a) Are you familiar with the Student Academic Support System (SASS) which provides a computerized listing of your program of studies?

[ ] Yes [ ] No **If No**, move on to Question 17.

(b) Have you used SASS for advisement purposes?

[ ] Yes [ ] No **If No**, move on to Question 17.

(c) In your opinion, how useful is SASS for advisement purposes?

[ ] Useful [ ] Not useful [ ] Not sure

16. **Please answer the following question if you are a community college student.**

(a) Are you familiar with the Student On-Line Advisement and Articulation System (SOLAR) which provides a computerized listing of specific program prerequisites?

[ ] Yes [ ] No

(b) Have you used SOLAR for advisement purposes?

[ ] Yes [ ] No

(c) Did you use another computerized advisement system at your college?

[ ] Yes [ ] No

17. In your opinion, how useful are automated advisement systems for planning your academic programs?

[ ] Useful [ ] Not useful [ ] Not sure

18. (a) Did you meet with an advisor for course scheduling and advising prior to registration for Fall 1989 classes?

[ ] Yes [ ] No

(b) **If Yes**, did you meet with: (Check all that apply)

[ ] A faculty advisor
[ ] A student (peer) advisor
[ ] An academic (professional) advisor at an advising center
[ ] Other (Specify)_____

(c) **If No**, why didn't you receive course advisement prior to registration?

[ ] Chose not to meet with my advisor
[ ] Did not know where to go
[ ] Did not have time
[ ] Other (Specify)_____
[ ] Did not need advisement
[ ] Could not make appointment with an advisor

(d) How satisfied are you with the academic advising you have received from your institution?

[ ] Very satisfied
[ ] Dissatisfied
[ ] Satisfied
[ ] Very dissatisfied
[ ] Neither satisfied or dissatisfied

19. (a) Have you received career counseling from your present institution?

[ ] Yes [ ] No

(b) **If Yes**, did you meet with: (Check all that apply)

[ ] A faculty member
[ ] A professional career counselor
[ ] A trained student peer counselor
[ ] Other (Specify)_____

(c) How satisfied are you with the career counseling you received from your institution?

[ ] Very satisfied
[ ] Dissatisfied
[ ] Satisfied
[ ] Very dissatisfied
[ ] Neither satisfied or dissatisfied

20. What suggestions do you have for improvements in either academic or career advising at your institution?

Academic Advising:_____

_____

Career Advising:_____

_____

21. (a) Did you participate in the Drop and Add process during Fall 1989?

[ ] Yes [ ] No **If No**, please move to Question 22.

(b) If you dropped a class in Fall 1989, please mark the **major** reason you had for dropping the class.

[ ] Class conflicted with work schedule
[ ] Class not held at convenient time
[ ] Did not meet prerequisite for course
[ ] Changed choice of courses
[ ] Changed program of study
[ ] Professor was too hard
[ ] Professor was too easy
[ ] Other (Specify)_____

(c) Did you end up with fewer classes than you wanted as the result of the drop and add process?

[ ] Yes [ ] No **If No**, move on to Question 22.

(d) **If Yes**, how many classes were you <u>not</u> able to replace with **any** other course offerings for Fall 1989.

[ ] Zero [ ] One [ ] Two [ ] Three [ ] More than three

22. (a) After you had selected the courses you wanted to take, how much time did you spend on going through the registration process?

[ ] Less than one hour
[ ] 1 - 2 hours
[ ] 2 - 3 hours
[ ] 3 - 8 hours
[ ] More than 8 hours

(b) How did you register?

[ ] Phone
[ ] In person by on-line terminal
[ ] Mail
[ ] Other (Specify)_____

23. Indicate your level of satisfaction with the registration process at your institution.

[ ] Very satisfied
[ ] Satisfied
[ ] Neither satisfied or dissatisfied
[ ] Dissatisfied
[ ] Very dissatisfied

Class Size

24. Have you ever been in a college class larger than 100? [ ] Yes [ ] No

25. Have you ever been in a college class smaller than 30? [ ] Yes [ ] No

26. If you answered **No** to either of the above, move on to Item 27. If you answered **Yes** to both of the above, complete the next set of items using the following scale.

1 - Much greater in small classes
2 - Greater in small classes
3 - No difference in the small or large classes
4 - Greater in large classes
5 - Much greater in large classes

	1	2	3	4	5
a. Overall quality of the classes	[ ]	[ ]	[ ]	[ ]	[ ]
b. Quality of instruction	[ ]	[ ]	[ ]	[ ]	[ ]
c. Personal relationship with instructor	[ ]	[ ]	[ ]	[ ]	[ ]
d. Chance to make a contribution in class	[ ]	[ ]	[ ]	[ ]	[ ]
e. Chance to ask a question in class	[ ]	[ ]	[ ]	[ ]	[ ]
f. Ability to see or hear the instructor	[ ]	[ ]	[ ]	[ ]	[ ]
g. Amount of material learned	[ ]	[ ]	[ ]	[ ]	[ ]
h. Personal satisfaction with the class	[ ]	[ ]	[ ]	[ ]	[ ]
i. Personal concentration on the subject matter/lecture	[ ]	[ ]	[ ]	[ ]	[ ]
j. Use of teaching assistants as the primary instructor	[ ]	[ ]	[ ]	[ ]	[ ]
k. Amount of work assigned	[ ]	[ ]	[ ]	[ ]	[ ]
l. Chance to receive a high grade	[ ]	[ ]	[ ]	[ ]	[ ]

27. In large classes that utilize small discussion groups in addition to the regular large class section, the discussion groups have: (Check all that apply)

[ ] Added to my understanding of the class curriculum
[ ] Helped me make a better grade
[ ] Did not help me in any way
[ ] I had no classes of this kind

28. If given a choice, I would:

[ ] Enroll in small classes
[ ] Enroll in large classes
[ ] Enroll in large classes with discussion groups
[ ] Depends on the subject matter or course
[ ] Enroll in either - does not matter

Financial Aid

29. When did you first receive information about financial aid for college?

[ ] In high school from high school counselors
[ ] In high school from college/university personnel
[ ] During college orientation activities before classes started
[ ] I never received information about financial aid for college

30. (a) Have you personally used the state-wide computerized information system CHOICES? [ ] Yes [ ] No

(b) **If Yes**, how helpful was CHOICES?

[ ] Helpful [ ] Not helpful [ ] Not sure

(c) Have you personally used any other computerized system for financial aid information?

[ ] Yes, (Specify)_____
[ ] No

(d) **If Yes**, how helpful was this system?

[ ] Helpful [ ] Not helpful [ ] Not sure

31. Have you ever applied for financial aid at your institution?

[ ] Yes [ ] No

If you answered <u>No</u> to the above question, you have completed this survey. If you answered <u>Yes</u>, please continue.

32. Have you tried to contact the Financial Aid Office at this institution for information? [ ] Yes [ ] No

33. How have you found phone communication with the Financial Aid Office?

[ ] I have not tried to call the Financial Aid Office
[ ] It is easy to get through to Financial Aid by phone
[ ] It takes several tries to get through to the Financial Aid Office
[ ] It is almost impossible to contact Financial Aid by phone

34. (a) How long did you usually have to wait before you were helped in the Financial Aid Office?

[ ] Less than 10 minutes
[ ] 10 to 15 minutes
[ ] Over 15 minutes

(b) If you had to wait over 15 minutes, why did you usually have to wait that long? (Check all that apply)

[ ] Lots of students before me [ ] Computer problems
[ ] No one was around to help me
[ ] Other (Specify)_____

35. A counselor is an employee in the Financial Aid Office who provides accurate, timely, and in-depth information about <u>your</u> financial aid situation and explains your options. Have you had an individual or personal meeting with a counselor from the financial aid office at your institution?

[ ] Yes [ ] No [ ] I never visited the office

36. If you received a student financial aid loan, did the Financial Aid Office provide you with counseling on repayment for this loan?

[ ] Yes [ ] No [ ] Didn't get a loan

37. Indicate your level of satisfaction with the following services at the Financial Aid Office using the scale below:

1 - Very satisfied
2 - Somewhat satisfied
3 - Somewhat dissatisfied
4 - Very dissatisfied
5 - Does not apply

	1	2	3	4	5
a. Printed Materials	[ ]	[ ]	[ ]	[ ]	[ ]
b. Timely notification of the award	[ ]	[ ]	[ ]	[ ]	[ ]
c. Timely receipt of the award	[ ]	[ ]	[ ]	[ ]	[ ]
d. Adequacy of financial aid counseling	[ ]	[ ]	[ ]	[ ]	[ ]
e. Hours the Office is open	[ ]	[ ]	[ ]	[ ]	[ ]
f. Location of the Office	[ ]	[ ]	[ ]	[ ]	[ ]
g. Information on my right to contest an award decision	[ ]	[ ]	[ ]	[ ]	[ ]

38. Does the Financial Aid Office distribute information about financial aid opportunities available through academic departments?

[ ] Yes [ ] No [ ] Don't Know

39. In general, how would you rate the staff at the Financial Aid Office? (Check one column for each word in the first column)

	Always	Sometimes	Never
Courteous	[ ]	[ ]	[ ]
Helpful	[ ]	[ ]	[ ]
Knowledgeable	[ ]	[ ]	[ ]

40. The above questions focused on your opinions about how financial aid is administered at this institution. Feel free to add comments on the administration of financial aid programs. Use the space below.

_____

_____

_____

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE.

POSTSECONDARY EDUCATION PLANNING COMMISSION

RESULTS OF SURVEY OF STUDENTS
FALL 1989

DEMOGRAPHIC INFORMATION

	TOTAL		COLLEGES		UNIVERSITIES	
	N	%	N	%	N	%
Gender						
Female	427	54.1	255	56.1	172	51.5
Male	362	45.9	200	43.9	162	48.5
Missing	6	-	5	-	1	-
Class Status						
Freshman	383	49.3	237	53.4	146	43.8
Sophomore	189	24.3	164	36.9	25	7.5
Junior	109	14.0	17	3.7	92	27.6
Senior	68	8.7	8	1.7	60	18.0
Graduate	16	2.1	7	1.6	9	2.7
Other	13	1.6	12	2.6	1	.3
Missing	18	-	16	-	2	-
Degree Sought						
AA	307	40.0	287	64.9	20	6.2
AS	98	12.7	93	21.0	5	1.5
Bachelor's	307	40.1	40	9.1	267	82.2
Master's	34	4.4	7	1.5	27	8.3
Doctorate	7	.9	3	.7	4	1.2
Other	8	1.0	6	1.2	0.0	0.0
Certificate	8	1.0	8	1.7	2	.6
Missing	27	-	17	-	10	-
Age						
Below 17	2	.3	1	2.0	1	.3
17-24	606	77.2	316	69.8	290	87.3
25-33	114	14.5	88	19.5	26	7.8
24-44	52	6.6	39	8.5	13	3.9
45-64	9	1.1	9	2.0	0.0	0.0
Over 64	2	.3	0.0	0.0	0.0	0.0
Missing	10	-	7	-	3	-

	TOTAL		COLLEGES		UNIVERSITIES	
	N	%	N	%	N	%
GPA						
Below 2.00	17	2.2	12	2.7	5	1.5
2.00-2.49	107	13.8	69	15.4	38	11.5
2.50-2.99	171	22.0	103	23.0	68	20.5
3.00-3.49	210	27.0	104	23.3	106	32.0
3.50-4.00	112	14.4	58	13.0	54	16.3
Unknown	161	20.7	101	22.6	60	18.1
Missing	16	-	12	-	4	-
Race						
White/Non-Hispanic	436	55.8	201	44.6	235	71.2
Black/Non-Hispanic	105	13.4	86	19.0	19	5.8
Hispanic	201	25.7	138	30.6	63	19.1
Asian American/Pacific Islander	25	3.2	15	3.3	10	3.0
American Indian/ Alaskan Native	1	.1	1	.2	0.0	0.0
Other	14	1.7	11	2.3	3	.9
Missing	13	-	8	-	5	-
Resident Status						
In-State	690	88.0	391	86.7	299	89.8
Out-of-State, Non U.S. Citizen	40	5.1	16	3.5	24	7.2
Out-of-State, U.S. Citizen	54	6.9	44	9.8	10	3.0
Missing	10	-	8	-	2	-
Dependent Status						
Yes	421	53.8	202	44.8	219	66.0
No	323	41.3	223	49.6	100	30.1
Don't know	38	4.9	25	5.6	13	3.9
Missing	12	-	9	-	3	-
English Native Language						
Yes	584	74.4	297	65.6	287	86.4
No	200	25.5	156	34.4	44	13.3
Missing	9	-	6	-	3	-

	TOTAL		COLLEGES		UNIVERSITIES	
	N	%	N	%	N	%
Semester Hours						
1-6	126	16.0	97	21.4	29	8.7
7-11	132	16.8	112	24.8	20	6.0
12-15	467	59.7	208	46.2	259	78.0
Over 15	59	7.5	35	7.7	4	7.2
Missing	11	-	8	-	3	-
Employed						
Yes	508	64.8	331	73.0	177	53.6
No	275	35.1	123	27.0	152	46.1
Missing	11	-	6	-	5	-
Employed 20 Hours Per Week						
Yes	371	73.0	267	80.9	104	58.4
No	137	27.0	63	19.1	74	41.6
Missing	286	-	129	-	157	-
Transfer Student						
Yes	181	23.2	75	16.6	106	32.2
No	597	76.8	374	83.4	223	67.8
Missing	17	-	11	-	6	-
Transfer Institution						
Florida Public University	19	9.7	13	14.9	6	5.6
Florida Private College/ University	17	8.4	12	13.1	5	4.6
Florida Public Community College	97	49.4	17	18.9	80	74.1
Other	64	32.5	47	53.1	17	15.7
Missing	598	-	371	-	227	-
Disabled Student						
Yes	17	2.1	12	2.5	5	1.5
No	767	97.9	440	97.5	327	98.5
Missing	10	-	7	-	3	-

STUDENT SURVEY
SELECTED RESULTS

Q-15A. Are you familiar with the Student Academic Support System (SASS) which provides a computerized listing of your program of studies?

University Students

	N	%
Yes	39	12.0
No	286	88.0
Total	325	-
Missing	10	-

Q-15B. Have you used SASS for advisement purposes?

University Students

	N	%
Yes	18	24.3
No	56	75.7
Total	74	-
Missing	261	-

Q-16A. Are you familiar with the Student On-line Advisement and Articulation System (SOLAR) which provides a computerized listing of specific program prerequisites?

Community College Students

	N	%
Yes	67	17.6
No	315	82.4
Total	382	-
Missing	77	-

Q-16B. Have you used SOLAR for advisement purposes?

Community College Students

	N	%
Yes	31	8.1
No	346	91.9
Total	377	-
Missing	82	-

Q-21A. Did you participate in the drop/add process during Fall 1989?

	UNIVERSITIES		COLLEGES	
	N	%	N	%
Yes	141	42.7	112	26.1
No	189	57.3	317	73.9
Total	330	-	429	-
Missing	5	-	30	-

Q-21B. If you dropped a class in Fall 1989, please mark the reason you had for dropping the class.

All Students

	N	%
Class conflicted with work schedule	40	17.8
Class not held at convenient time	50	22.0
Did not meet prerequisite for course	13	5.6
Changed choice of courses	44	19.6
Changed program of study	7	2.9
Professor was too hard	14	6.0
Professor was too easy	2	.9
Other (Specify)	57	25.2
Total	227	-
Missing	569	-

Q-21C. Did you end up with fewer classes than you wanted as the result of the drop/add process?

	UNIVERSITIES		COLLEGES	
	N	%	N	%
Yes	36	22.0	39	21.0
No	128	78.0	147	79.0
Total	164	-	186	-
Missing	171	-	272	-

Q-22A. After you had selected the courses you wanted to take, how much time did you spend going through the registration process?

	UNIVERSITIES		COLLEGES	
	N	%	N	%
Less than one hour	132	40.2	192	44.2
1 - 2 hours	72	22.1	131	30.2
2 - 3 hours	53	16.3	65	15.0
3 - 8 hours	49	14.5	32	7.4
More than 8 hours	23	6.9	13	3.0
Total	329	-	433	-
Missing	6	-	26	-

Q-22B. How did you register?

	UNIVERSITIES		COLLEGES	
	N	%	N	%
Phone	212	67.3	73	17.3
In-person by on-line terminal	90	28.6	328	78.1
Mail	0	0	3	.6
Other	13	4.1	17	4.0
Total	315	-	421	-
Missing	21	-	39	-

Q-23. Indicate your level of satisfaction with the registration process at your institution?

	UNIVERSITIES		COLLEGES	
	N	%	N	%
Very satisfied	81	24.7	87	20.1
Satisfied	136	41.5	229	52.6
Neither satisfied or dissatisfied	43	13.1	66	15.2
Dissatisfied	47	14.3	34	7.8
Very unsatisfied	21	6.4	19	4.3
Total	328	-	435	-
Missing	7	-	25	-

POSTSECONDARY EDUCATION PLANNING COMMISSION

Michael B. Butler, Chairman
Altamonte Springs

Alan G. Fickett
Orlando

Thomas A. Heath
Auburndale

Ralph Hogges
Miami

Donald P. Kahn
Coral Gables

Robert G. Kerrigan
Pensacola

D. Burke Kibler, III
Lakeland

Thomas R. McGehee
Jacksonville

Robert B. Mautz
Gainesville

Tully Patrowicz
Mount Dora

Robert G. Stern
Gainesville

Carolyn M. Wilson
Tampa

Dr. William B. Proctor, Executive Director

The Postsecondary Education Planning Commission, initially created by executive order in 1980 and subsequently given statutory authority, serves as an advisory body to the State Board of Education on all postsecondary education matters. The Commission is composed of 11 members of the general public and one full-time student registered at a postsecondary education institution in Florida. Members are appointed by the Governor with the approval of three members of the State Board of Education and subject to confirmation by the Senate.

The major responsibility of the Commission is preparing and updating every five years a master plan for postsecondary education. The enabling legislation directed that the Plan "shall include consideration of the promotion of quality, fundamental educational goals, programmatic access, needs for remedial education, regional and state economic development, demographic patterns, student demand for programs, needs of particular subgroups of the population, implementation of innovative educational techniques and technology, and the requirements of the labor market. The capacity of existing programs, in both public and independent institutions, to respond to identified needs shall be evaluated and a plan shall be developed to respond efficiently to unmet needs."

Other responsibilities include recommending to the State Board of Education program contracts with independent institutions; advising the State Board regarding the need for and location of new programs, branch campuses and centers of public postsecondary education institutions; reviewing public postsecondary education budget requests for compliance with the State Master Plan; recommending to the Commissioner of Education proposals for support through the Postsecondary Cooperation Trust Fund; and periodically evaluating the State's 28 regional coordinating councils for vocational education, adult general education and community instructional services.

Further information about the Commission, its publications, meetings and other activities may be obtained from the Commission office, 210 Collins Building, Department of Education, Tallahassee, Florida, 32399-0400; telephone (904) 488-7894.

ERIC Clearinghouse for
Junior Colleges MAY 3 1 1990